

**3M General Offices**

3M Center  
St. Paul, Minnesota 55144-1000  
612/733 1110

00-10  
1379

Industrial Hygiene

AUG 18 1989

Duns No.: 00-617-3082

**MATERIAL SAFETY  
DATA SHEET****3M****DIVISION: INDUSTRIAL CHEMICAL PRODUCT DIVISION****TRADE NAME:**

FC-98 FLUORAD Brand Fluorochemical Surfactant

**3M I.D. NUMBER:** 98-0207-0203-5 98-0207-0204-3 98-0211-0889-3**ISSUED:** FEBRUARY 14, 1989**SUPERSEDES:** JULY 27, 1988**DOCUMENT:** 10-3797-7

1. INGREDIENT	C.A.S. NO.	PERCENT	EXPOSURE VALUE UNIT	LIMITS TYPE AUTH
Potassium Perfluoroalkyl Cyclohexyl Sulfonate	67584-42-3	60.0 - 70.0	0.1 mg/m3	TWA 3M
Potassium Perfluoroalkyl Cyclohexyl Sulfonate	68156-07-0	< 20.0	0.1 mg/m3	TWA 3M
Potassium Perfluoroalkyl Cyclohexyl Sulfonate	68156-01-4	< 20.0	0.1 mg/m3	TWA 3M
Potassium Perfluoroalkyl Cyclohexyl Sulfonate	3107-18-4	< 20.0	0.1 mg/m3	TWA 3M

**SOURCE OF EXPOSURE LIMIT DATA:**

- 3M: 3M Medical Department Guideline

**2. PHYSICAL DATA**

BOILING POINT:..... N/A  
VAPOR PRESSURE:..... N/A  
VAPOR DENSITY: ..... N/A  
EVAPORATION RATE:..... N/A  
SOLUBILITY IN WATER: ..... 0.1-1.0 %  
SP. GRAVITY:..... ca. 0.600 Water = 1  
(Bulk)  
PERCENT VOLATILE: ..... 0.00 %  
VOLATILE ORGANICS: ..... N/D  
pH: ..... 6.00-8.00  
(0.1% Aqueous)  
VISCOSITY: ..... N/D  
APPEARANCE AND ODOR: Free-flowing off-white powder, slight sulfide odor.

**3. FIRE AND EXPLOSION HAZARD DATA**

FLASH POINT:.....  
FLAMMABLE LIMITS - LEL: ..... N/A  
FLAMMABLE LIMITS - UEL: ..... N/A  
AUTOIGNITION TEMPERATURE: ... N/D  
EXTINGUISHING MEDIA:  
Water, Foam, CO2, Dry Chemical  
SPECIAL FIRE FIGHTING PROCEDURES:  
None Known  
UNUSUAL FIRE AND EXPLOSION HAZARDS:  
Toxic by-products, including HF, may be formed.

**4. REACTIVITY DATA**

STABILITY: Stable  
INCOMPATIBILITY - MATERIALS TO AVOID:  
NA  
HAZARDOUS POLYMERIZATION: Will Not Occur

Abbreviations: N/D - Not Determined N/A - Not Applicable

BOE-C6-0229937

Duns No.: 00-617-3082

MATERIAL SAFETY  
DATA SHEET



MSDS: FC-98 FLUORAD Brand Fluorochemical Surfactant  
FEBRUARY 14, 1989

PAGE: 2 of 3

---

**4. REACTIVITY DATA (continued)**

---

**HAZARDOUS DECOMPOSITION PRODUCTS:**

Thermal decomposition may produce toxic materials including HF.

---

**5. ENVIRONMENTAL INFORMATION**

---

**SPILL RESPONSE:**

Observe precautions from other sections. Use toxic dust mask. Use wet sweeping compound, or water to avoid dusting. Place in a closed container. Clean up residue with water.

**RECOMMENDED DISPOSAL:**

Discharge spent solutions to a wastewater treatment system. Disposal alternative: Mix with flammable material and incinerate in an industrial or commercial facility. Combustion products will include HF. Or: Dispose of waste product in a facility permitted to accept chemical wastes. Since regulations vary, consult applicable regulations or authorities before disposal. U.S. EPA Hazardous Waste No.: None

**ENVIRONMENTAL DATA:**

96-Hr. LC50, Fathead Minnow(Pimephales promelas) = 155 mg/l; TOC = 0.17 g/g; COD = <0.004 g/g; BOD20 = Nil.

**SARA HAZARD CLASS:**

FIRE HAZARD: No PRESSURE: No REACTIVITY: No ACUTE: Yes CHRONIC: Yes

---

**6. SUGGESTED FIRST AID**

---

**EYE CONTACT:**

Immediately flush with plenty of water. Call a physician.

**SKIN CONTACT:**

IMMEDIATELY wash affected area with soap and water.

**INHALATION:**

Remove to fresh air.

**IF SWALLOWED:**

Give two glasses of water. IMMEDIATELY call a physician or Poison Control Center.

**OTHER FIRST AID:**

NONE

---

**7. PRECAUTIONARY INFORMATION**

---

Avoid eye contact and breathing dust. Avoid skin contact. Prevent moisture contamination to keep powder free flowing. Do not take internally. Wash hands thoroughly before eating. Launder clothing before re-use.

---

3M Center  
St. Paul, Minnesota 55144-1000  
612/733 1110

Duns No.: 00-617-3082

MATERIAL SAFETY  
DATA SHEET**3M**

MSDS: FC-98 FLUORAD Brand Fluorochemical Surfactant  
FEBRUARY 14, 1989

PAGE: 3 of 3

---

**7. PRECAUTIONARY INFORMATION (continued)**

---

**SPECIAL PROTECTION:**

EYE PROTECTION: Safety Goggles

SKIN PROTECTION: Rubber gloves, protective clothing.

VENTILATION: Local exhaust ventilation should be used to control airborne dust.

RESPIRATORY PROTECTION: Toxic dust or supplied air respirator if dust is not well controlled.

**ADDITIONAL EXPOSURE LIMITS**

INGREDIENTS	---- EXPOSURE LIMITS ----	
	VALUE UNIT	TYPE AUTH
Potassium Perfluoroalkyl Cyclohexyl Sulfonate	0.1 mg/m <sup>3</sup>	TWA 3M

**SOURCE OF EXPOSURE LIMIT DATA:**

- 3M: 3M Medical Department Guideline

---

**8. HEALTH HAZARD DATA**

---

EYE CONTACT: FC-98 is moderately irritating ocularly. Animal studies indicate FC-98 elicits transient irritation characterized by conjunctival and corneal effects.

SKIN CONTACT: Animal studies indicate FC-98 is non-irritating dermally. FC-98 may be absorbed through the skin. Avoid skin contact. Acute dermal LD50 (rabbit) >5 g/kg.

INHALATION: FC-98 is moderately toxic upon inhalation. Avoid breathing of dust.

INGESTION: The oral LD50 (rat) 1.25-2.5 gm/kg. FC-98 can be considered slightly toxic upon ingestion.

---

Abbreviations: N/D - Not Determined N/A - Not Applicable

---

The information on this Data Sheet represents our current data and best opinion as to the proper use in handling of this product under normal conditions. Any use of the product which is not in conformance with this Data Sheet or which involves using the product in combination with any other product or any other process is the responsibility of the user.